CLAIMS

WHAT IS CLAIMED IS:

1. A method for supporting telephony services over a data network, the method comprising:

retrieving message waiting indication information from a voice mail system designated by a user, wherein the message waiting indication information specifies existence, within the voice mail system, of a voice mail message for the user;

determining an instant communication client of the user; and

forwarding the message waiting indication information over the data network to the instant communication client for display.

2. A method according to claim 1, wherein the voice mail system is among a plurality of voice mail systems associated with the user, the method further comprising:

receiving another message waiting indication information associated with a different one of the voice mail systems; and

forwarding the other message waiting indication information to the instant communication client, wherein the instant communication client displays the plurality of message waiting indication information concurrently.

3. A method according to claim 1, wherein the instant communication client is among a plurality of instant communication clients, the method further comprising:

forwarding the message waiting indication information to one or more of the instant communication clients.

4. A method according to claim 1, further comprising:

accessing a user database for a profile of the user, wherein the profile specifies the voice mail system and the instant communication client for displaying the message waiting indication information.

5. A method according to claim 4, further comprising:
receiving a request to modify the profile of the user; and
modifying the profile based on the request.

6. A method according to claim 1, wherein the instant communication client is resident on one of a computer system, a Personal Digital Assistant (PDA), a cellular phone, a gaming console, and a web appliance.

7. A method according to claim 1, the method further comprising:
receiving an identifier associated with a called station served by the voice mail system; and
forwarding the identifier to the instant communication client, wherein the instant communication client displays the identifier along with the message waiting indication information.

8. A method according to claim 7, wherein the identifier is derived from one of a Dialed Number Identification Service (DNIS) number and Automatic Number Identification (ANI).

9. A method according to claim 1, the method further comprising:
determining whether the instant communication client is available; and
if the instant communication client is not available, storing the message waiting indication information for later delivery.

10. A method according to claim 1, the method further comprising:

appending supplemental information including one of time stamp information and advertisement information to the message waiting indication information.

11. A method according to claim 1, the method further comprising:

associating a user with one or more voice mail systems; and

associating the user with one or more instant communication clients including the instant communication client.

12. A method according to claim 1, the method further comprising:

generating a command message to the voice mail system to activate or deactivate message waiting indication function of the voice mail system.

13. A method according to claim 1, the method further comprising:

generating a voice mail indicator message to notify a computing system hosting the instant communication client or an intermediate system, wherein the voice mail indicator message includes an identification field for the instant communication client and one or more fields indicating presence of voicemail in respective voice mail systems.

14. A computer-readable medium carrying one or more sequences of one or more instructions for supporting telephony services over a data network, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

retrieving message waiting indication information from a voice mail system designated by a user, wherein the message waiting indication information specifies existence, within the voice mail system, of a voice mail message for the user;

determining an instant communication client of the user; and

forwarding the message waiting indication information over the data network to the instant communication client for display.

15. A computer-readable medium according to claim 14, wherein the voice mail system is among a plurality of voice mail systems associated with the user, the computer-readable medium further including instructions for causing the one or more processors to perform the steps of:

receiving another message waiting indication information associated with a different one of the voice mail systems; and

forwarding the other message waiting indication information to the instant communication client, wherein the instant communication client displays the plurality of message waiting indication information concurrently.

16. A computer-readable medium according to claim 14, wherein the instant communication client is among a plurality of instant communication clients, the computer-readable medium further including instructions for causing the one or more processors to perform the step of:

forwarding the message waiting indication information to one or more of the instant communication clients.

17. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the step of:

accessing a user database for a profile of the user, wherein the profile specifies the voice mail system and the instant communication client for displaying the message waiting indication information.

18. A computer-readable medium according to claim 17, the computer-readable medium further including instructions for causing the one or more processors to perform the steps of:

receiving a request to modify the profile of the user; and

modifying the profile based on the request.

19. A computer-readable medium according to claim 14, wherein the instant communication client is resident on one of a computer system, a Personal Digital Assistant (PDA), a cellular phone, a gaming console, and a web appliance.

20. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the steps of:

receiving an identifier associated with a called station served by the voice mail system; and

forwarding the identifier to the instant communication client, wherein the instant communication client displays the identifier along with the message waiting indication information.

21. A computer-readable medium according to claim 20, wherein the identifier is derived from one of a Dialed Number Identification Service (DNIS) number and Automatic Number Identification (ANI).

22. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the steps of:

determining whether the instant communication client is available; and

if the instant communication client is not available, storing the message waiting indication information for later delivery.

23. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the step of:

appending supplemental information including one of time stamp information and advertisement information to the message waiting indication information.

24. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the steps of:

associating a user with one or more voice mail systems; and

associating the user with one or more instant communication clients including the instant communication client.

25. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the step of:

generating a command message to the voice mail system to activate or deactivate message waiting indication function of the voice mail system.

26. A computer-readable medium according to claim 14, the computer-readable medium further including instructions for causing the one or more processors to perform the step of:

generating a voice mail indicator message to notify a computing system hosting the instant communication client or an intermediate system, wherein the voice mail indicator message includes an identification field for the instant communication client and one or more fields indicating presence of voicemail in respective voice mail systems.

27. A system for supporting telephony services over a data network, the system comprising:

a gateway configured to retrieve message waiting indication information from a voice mail system designated by a user, wherein the message waiting indication information specifies existence, within the voice mail system, of a voice mail message for the user, the gateway determining an instant communication client of the user; and

a server configured to forward the message waiting indication information over the data network to the instant communication client for display.

28. A system according to claim 27, wherein the voice mail system is among a plurality of voice mail systems associated with the user, the gateway being further configured to receive

another message waiting indication information associated with a different one of the voice mail systems, the server forwarding the other message waiting indication information to the instant communication client, wherein the instant communication client displays the plurality of message waiting indication information concurrently.

29. A system according to claim 27, wherein the instant communication client is among a plurality of instant communication clients, the message waiting indication information being forwarded to one or more of the instant communication clients.

30. A system according to claim 27, further comprising:

a user database for storing a profile of the user, wherein the profile specifies the voice mail system and the instant communication client for displaying the message waiting indication information.

31. A system according to claim 30, wherein the server receives a request to modify the profile of the user, and the profile is modified based on the request.

32. A system according to claim 27, wherein the instant communication client is resident on one of a computer system, a Personal Digital Assistant (PDA), a cellular phone, a gaming console, and a web appliance.

33. A system according to claim 27, wherein the gateway receives an identifier associated with a called station served by the voice mail system, the identifier being forwarded to the instant communication client which displays the identifier along with the message waiting indication information.

34. A system according to claim 33, wherein the identifier is derived from one of a Dialed Number Identification Service (DNIS) number and Automatic Number Identification (ANI).

35. A system according to claim 27, wherein the gateway determines whether the instant communication client is available, and if the instant communication client is not available, the gateway stores the message waiting indication information for later delivery.

36. A system according to claim 27, wherein the gateway appends supplemental information including one of time stamp information and advertisement information to the message waiting indication information.

37. A system according to claim 27, wherein a user is associated with one or more voice mail systems, and the user is associated with one or more instant communication clients.

38. A system according to claim 27, wherein the gateway is further configured to generate a command message to the voice mail system to activate or deactivate message waiting indication function of the voice mail system.

39. A system according to claim 27, wherein the gateway is further configured to generate a voice mail indicator message to notify a computing system hosting the instant communication client or the server, wherein the voice mail indicator message includes an identification field for the instant communication client and one or more fields indicating presence of voicemail in respective voice mail systems.

40. A method for supporting telephony services over a data network, the method comprising:

aggregating message waiting indication information from one or more voice mail systems for notifying a user of presence of a voice mail message resident on any one of the voice mail systems; and

transmitting a notification message over the data network to an instant communication client based upon the aggregated message waiting indication information, wherein the notification message specifies the presence of the voice mail message.

41. A server for supporting telephony services over a data network, the method comprising:

means for aggregating message waiting indication information from one or more voice mail systems for notifying a user of presence of a voice mail message resident on any one of the voice mail systems; and

means for transmitting a notification message over the data network to an instant communication client based upon the aggregated message waiting indication information, wherein the notification message specifies the presence of the voice mail message.